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On Neanderthal vs. *Paranthropus*

by Dmitri Bayanov and Igor Bourtsev
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We warmly welcome Strasenburgh's response (CA 16:486–87) to Porshnev's article and our comments. It is encouraging and refreshing to deal with a critic who does not "quietly ignore" the subject. Moreover, it is evident that Strasenburgh is one of us—a hominologist, one who recognizes and attempts to substantiate the existence of relic hominoids. His argument with us is not about whether the creatures exist or not, but about their exact identification. It is probably this "family bond" that explains the curtness of his comment. We don't mind the form, but we take exception to much of the substance of Strasenburgh's retort.

To begin with, it seems a contradiction to pose as the defender of both relic hominoids and orthodoxy in primatology. There is no such thing as a one-man (or few-men) orthodoxy—the notion takes greater numbers than that—and no matter how Strasenburgh defines his views, we doubt that "the majorities on both sides of the question" can take them as orthodox. The orthodox view in primatology is that *Homo sapiens* is the only living species of the family Hominidae. To prove the point, it is enough to quote Napier (1973:204), who may be supposed to know what orthodoxy means in his science and who says that if any of the Sasquatch footprints "is real then as scientists we have a lot to explain. Among other things we shall have to re-write the story of human evolution. We shall have to accept that *Homo sapiens* is not the one and only living product of the hominid line, and we shall have to admit that there are still major mysteries to be solved in a world we thought we knew so well."

Strasenburgh finds simply untrue our statement that "orthodox primatology . . . apparently . . . has no clues for analyzing the evidence of the continued existence on earth of higher primate forms distinct from both the Pongidae and *H. sapiens*." His objection apparently arises from his attaching a different meaning to the word "clues" from the one we intended. We meant *conceptual* clues, part of a theory to guide the researcher in analyzing factual material, not facts or evidential "tips" which help substantiate the existence of relic hominoids. Such tips abound, but they are ignored by orthodox primatologists because all their theorizing is done on a different wave-length.

As for Strasenburgh's unorthodox idea that *Paranthropus* is the cause of all our troubles, emotionally we have nothing against it: the hominologist's dream is that all the hominid forms known from the fossil record, and even those not known from it, will turn out to be alive. The dream, however, has to be checked against reality. The burden of proof as regards the relevance of *Paranthropus* to our problem is on Strasenburgh, and we regret that he leaves us guessing as to how he checked out his idea. One tip seems to be his use of the adjectives "robust" and "gracile" to describe hominid fossils in Africa. Considering that relic hominoids can be safely described as "robust" and *H. sapiens*—though not so safely—as "gracile," the idea is probably that *A. robustus* (*Paranthropus*) must be the ancestor of relic hominoids just as gracile *A. africanus* is considered ancestral to *H. sapiens*. If so, the argument seems to us simplistic and superficial. What about the Broken Hill skull? Doesn't it indicate a creature by no means less robust than any *Paranthropus?* And can classic Neanderthals by any stretch of the imagination be considered gracile?

The truth of the matter is that relic hominoids, or at least some of them, resemble *Paranthropus* about as much as we and Strasenburgh resemble, say, *H. habilis*. Strasenburgh is therefore called upon to explain how and why such changes occurred in relic hominoids. We find that relic hominoids more closely resemble fossil forms other than *Paranthropus* and shall explain and substantiate this view below. First, however, we want to dwell on our understanding of the Hominidae in general (in current classification) in the light of our present knowledge of relic hominoids, adopting Porshnev's ideas as a working hypothesis.

The Uniqueness of Hominids

Porshnev's most striking and unorthodox thesis is that what at present are termed *H. neanderthalensis*, or even *H. sapiens neanderthalensis*, were actually animals, not men. Stunned by this thought, the reader should not overlook some other things we have said about these creatures, namely, that they were the highest animals possible: any further advance meant their turning into man. Thus, to understand the new theory it is necessary to remember that it not only assigns pre-*sapiens* hominids to the animal kingdom, but also recognizes their qualitative difference from all other animals. We have mentioned some aspects of hominid uniqueness earlier (CA: 15 452–56) and want to stress some others here.

When the anthropoid ape evolved into a hominid, it was a case of a warm-clime-forest-dweller becoming a creature capable of living in any landscape—forest, desert, rocky mountains, swamps—and eventually in any climatic zone. It was also, judging by the evidence of *H. sapiens* and relic hominoids, a matter of the appearance in the order Primates of able swimmers to whom rivers were no barriers. In itself a great evolutionary achievement, this ecological autonomy of the hominids, especially in their late stages, was mainly due to their biggish brains and free hands, which managed to eke out a hand-to-mouth existence under any conditions. Hence the hominid conquest of the earth.

Normally, in the animal kingdom such vast and varied geographic distribution of a taxon would have led to adaptive radiation into a great many species, but this apparently was not the case with the Hominidae. Paradoxically, they seem to be genetically a more closely knit family, especially in the late stages of their development, than the Pongidae. This is suggested by man's genetic and physiological closeness to the chimpanzee and the gorilla. Since pre-*sapiens* hominids in a sense occupy an intermediate position between *H. sapiens* and the apes, it is clear that they had even greater affinity to *H. sapiens* and to one another than exists between *H. sapiens* and the living anthropoids.

Morphologically, however, they varied considerably, as is known from the fossil record. How can we account for this? Can we imagine a systematic group whose morphological diversity has outstripped, so to speak, its taxonomic diversity? Such a situation is quite familiar among the domestic animals. The astounding variety of dogs, for example, all of whom belong to one species, far exceeds in morphological terms the difference that exists between species of the wild Canidae such as, say, the wolf and the jackal. The canine breeds, however, are the product of man's activity. Who or what was responsible for the variety of the hominids? We believe that the near-human qualities of these creatures could have been at least partly responsible for the conditions of their evolution, though, of course, pre-*sapiens* hominids did not pursue or even perceive the process consciously. Simply put, a higher primate that had risen from all fours to a habitual upright position and had a big brain and lots of curiosity was more than any other animal liable to, figuratively speaking, behold the horizon and start wondering what was beyond it. Hominids' mobility took them into all sorts of environments in many a land, and their ethological ingenuity and vitality made it possible for them to colonize those newly discovered areas.

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Undoubtedly, new habitats made new demands on the colonizing hominids and produced selective pressures of different kinds. According to the Porshnev theory, all early hominids passed through what we have termed a stage of brain-and-marrow eating. This made them bipedal, and at the same time it must have influenced their dentition. We know that the peculiarities of the hominid dentition appear very early in the history of the family and continue to develop in the same direction—though not without setbacks and deviations—from the Australopithecinae to *H. sapiens*. It is the setbacks and deviations that interest us here.

Hominids were omnivorous, and, because the mode of feeding plays a major role in natural selection, it mattered a great deal which part of the diet predominated in the particular habitat. In habitats where vegetable ingredients in the hominid diet predominated over such soft animal foods as brain and marrow, the creatures must have developed or retained bigger molars, stronger chewing muscles, and rougher surfaces of the skull—in short, some of the features of specialized forms. Along with some other students, however, we assume that specialization in hominids was not nearly as intense as in other zoological families and that the tendency to speciate was accordingly reduced. As Mayr (1970:394–95) has put it,

> In the animal kingdom the invasion of a new adaptive zone usually results in a burst of adaptive radiation into various subniches. This has not happened in the history of the family Hominidae. . . . [One] reason is that isolating mechanisms in hominids apparently develop only slowly. There have been many isolates in the polytypic species *Homo sapiens* and in the species ancestral to it, but isolation never lasted sufficiently long for isolating mechanisms to become perfected.

This means in practical terms that there was a lot of interbreeding among hominid populations as wave of invasions followed wave in the history of the family. It is as if dog owners were to let their pets loose to interbreed freely from time to time, with dog breeders continually starting their work anew from the motley material of sundry mongrels.

Yet there must have been a time and an event which set a limit to the hominid-family "incest" that follows from Porshnev's theory, and that momentous event was the emergence of *H. sapiens*. Apparently our *sapiens* ancestors were sapient enough to realize the uniqueness of their breed and take great pains to preserve it. We surmise this from the universal taboo surrounding the relic hominoid among all the indigenous populations today. We think that much of the mystery and deification or condemnation of the creature in historic times is due to the fact that he has been a potential, and sometimes actual, "diluter" of the human race. Thus, if no permanent natural barriers to hominid interbreeding existed—at least in the late hominids—then there appeared an artificial, social barrier with the advent of *H. sapiens*. Like any social barrier, it was not absolute, and there must have been a certain amount of interbreeding between *H. sapiens* and the pre-*sapiens* creatures. It is by gene flow resulting from this that certain racial traits common to *H. sapiens* and some pre-*sapiens* forms are to be explained, as is suggested by Roginsky (1969:139)—to whose theory of "broad monocentrism" in the origin of *H. sapiens*, in opposition to the polycentrism expounded by Coon and others, we subscribe.

Such, in brief, is our understanding of the nature and history of the Hominidae in the light of our present knowledge. Much of the taxonomic relationships and status in the family remains unclear, and any hominid classification (including Porshnev's) has to be taken as a tentative one. Nonetheless, just as in translation a poor dictionary is better than none at all, so in zoology an inadequate classification is better than no classification. What we find valuable in Porshnev's classification of the higher primates is its central idea, the principle of drawing a line between man and animal, not necessarily its details of taxonomic names and ranks. Any classification is the work of man, and its existence can ultimately be justified only by its correspondence to the work of Nature. Relic hominoids being flesh and blood, their existence does not depend on any classification, but the existence of any hominid classification is bound to depend on the nature of relic hominoids. We expect that when the creatures are finally discovered and recognized by science, the history of primatology and related sciences will be sharply divided into "before" and "after" this event. In short, to size up the creature we seek with the existing taxonomy is like measuring an object with a measure which is bound to be changed when the measurement is finished. Yet engage in this strange procedure we must, if only to show that our "wards" are no freak *sapiens* or visitors from outer space.

Before applying the hominid yardstick to the hominoid (we use this term in its etymological sense of "manlike" and *not* in its taxonomic meaning)—that is, trying to solve the mystery of the "snowman," "wild man," or whatever you choose to call it with the help of existing paleoanthropological knowledge—let us recall another mystery, one residing within this very body of knowledge. By this we mean the generally accepted view that *H. sapiens* is the only surviving species of the Hominidae. Isn't it mysterious, if not mystical, that we should be the only survivors of the whole family, while the nearest family, the Pongidae, boasts several surviving forms? And isn't it possible that by confronting one mystery with the other we shall be able, like detectives, to unravel them both?

The question then arises from which end of the Hominidae to start this confrontation—which form, early or late, to use as the yardstick. Hominologists in the West, including Strasenburgh, start with early forms, whereas Porshnev, relying on his revolutionary theory, used not simply late forms, but the latest, *H. neanderthalensis*. In retrospect, it is clear to us that methodologically, and even simply in terms of common sense, Porshnev was absolutely right. If an orphan were to discover that one of his relatives happened to be alive, whom would he think of as possible candidates? Probably sisters and brothers, then parents and grandparents, and then in the same order cousins and aunts and uncles. Indeed, since *H. sapiens* knows he exists, it is simple logic for him to wonder about the existence or nonexistence of his nearest kin. As we well know, however, there has been, and still is, a formidable mental block preventing scientists from heeding this logic in the case of Neanderthalers. Since, thanks to Porshnev, we have no such impediment, we can unhesitatingly scrutinize Neanderthalers as candidates for the ancestors of at least some of the relic hominoids.

The Riddle of Neanderthal Disappearance

In the mystery of the Hominidae, the riddle of Neanderthal disappearance ranks first and foremost. The creatures were the latest of the pre-*sapiens* hominids and, according to the fossil and archaeological record, more widespread on earth than any other hominids except modern *sapiens*. In fact, their traces have been found in all corners of the Old World. Whatever laws or patterns of evolution or social history we apply to the Neanderthalers, we know of no reason they should have disappeared from life in the relatively very short time that separates their recognized fossils or artifacts from our day (not to mention the so-called pseudo-Neanderthal remains, of which we shall write below). We can safely assume they did not have atom bombs, inflation, pollution, big cities, etc. They did have natural cataclysms, on no less a scale than Ice Ages, but they are known to have weathered them. Thus, of all the pre-*sapiens* creatures they were the most recent, the brainiest, the hardiest, and the most numerous. Yet, where are they?

Supposition that they were wiped out by *H. sapiens* is not convincing, because initially they must have outnumbered *H. sapiens* and there has always been and still is room on earth to avoid the sight of our glorious species. That they might all have mixed with and been absorbed by *H. sapiens* is also implausible,

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because, as we've said, *H. sapiens* were not that numerous then; there must have been more danger of the latter's being diluted and even absorbed by the Neanderthalers. The absorption hypothesis ignores the existence of social barriers to intermarriage among *sapiens* races and nationalities; it is only reasonable to expect even stricter bans vis-à-vis hominids of different evolutionary status.

Porshnev's theory provides a neat and simple answer to the riddle: today's relic hominoids are yesterday's Neanderthals. An immediate obstacle to the general acceptance of this answer is the discrepancy between the animal ways of the relic hominoids and the human ways ascribed to Neanderthalers. Some of these ways (the making and use of stone tools and fire) are facts, while others (hairless bodies, clothing, religious rites) are interpretations. The interpretations are not much of an obstacle at present to the adherents of the new theory; as to the facts, there is nothing impossible in Porshnev's idea, which we share, that in the past all or some Neanderthalers made stone tools and used fire, while today none, or few, of their relic descendants do so.

Napier (1973:191) admits the possibility of "pockets of Neanderthalers" surviving today "in geographically remote regions," but only on the condition that they have human ways: "Unless something very extraordinary took place in the evolution of Neanderthalers, any connection between the relatively sophisticated people of the Mousterian culture period and the lumbering hair-clad giants of the Cascade Mountains is highly improbable." Something very extraordinary *did* take place in the evolution of Neanderthalers: their giving rise to our own type (*H. sapiens*, in the nomenclature we prefer, or *H. sapiens sapiens* in the nomenclature of Napier's choosing). Knowing our kind as we do, we realize that nothing more extraordinary could have happened to them! Being by far the more able and eager tool maker, *H. sapiens* ousted the Neanderthaler from all the world's best stone-tool workshops and made him retreat into the wilds, where he had to rely for survival more and more on his animal powers. In fact, we don't know whether all Neanderthal populations were more or less equally advanced in their heyday with regard to tool making and the use of fire or whether they were ethologically as diverse as *H. sapiens* is culturally diverse today.

Napier says that Neanderthalers "appear to have advanced sufficiently in the ability to conceptualize their thoughts to have conceived of an after-life" (p. 185). They may well appear so to Napier, but the question arises in what form they did their conceptualizing if their very linguistic ability is called into question (and not only by Porshnev; cf. Lieberman and Crelin 1971). Neanderthals are not known to have been able to draw an outline of an animal, which *sapiens* three-year-olds can do, and whether they made up for the deficiency with thoughts of an after-life will probably never be known. What we do know is that the late, or "classic," Neanderthalers have morphological features indicative of a so-called *retrogressive* evolution. Thus the Porshnev theory posits and supplements in ethological (or cultural) terms what is already accepted in morphology.

Besides, as Porshnev has pointed out (CA 15:450), at least some of the Neanderthaloid skeletons found in more recent strata and looked upon as "pseudo-Neanderthal" may be real Neanderthalers, among them the Neanderthaloid Podkumok (Caucasus) skullcap, which is of as recent origin as the Bronze Age, and the remains dealt with by Stołyhwo (1937). Having noted what look like rather late or recent remains of Neanderthalers in the ground, we can go on to search for traces of them in historic times on the ground. Obviously, we cannot expect the object of our interest to be referred to in historical sources in accordance with any nomenclature prevailing today. Accordingly, the Porshnev theory envisages a search for *H. neanderthalensis recens* under such names as pans, satyrs, fauns, sileni, silvans, nymphs, and countless others. Indeed, the discovery of relic hominoids may be expected to bring about a revolution no less resolute and resounding in what Napier calls the "Goblin Universe"—the study and understanding of mythology, and demonology in particular—than in primatology. Since we are preoccupied with biology here, let us start with the presentation of evidence from sources which pertain to natural history. Classic Neanderthalers are known to have lived in Europe, so both in a geographical and historical sense Europe is a testing ground for the Neanderthal-hominoid hypothesis. Our task, then, is, first, to show that Europe has been a habitat of hominoids in historic times and, second, to argue that these hominoids have been none other than relics of the Neanderthalers.

Some Ancient and Medieval Evidence

A celebrated source of information on hominoids is Titus Lucretius Carus (c. 99–c. 55 B.C.), who in Book 5 of his *De Rerum Natura* (Lucretius 1947:217–18) describes a race of "earth-born" men which

> was built up on larger and more solid bones within, fastened with strong sinews traversing the flesh; not easily to be harmed by heat or cold or strange food or any taint of the body. . . . Nor as yet did they know how to serve their purposes with fire, nor to use skins and clothe their body in the spoils of wild beasts, but dwelt in woods and the caves on mountains and forests, and amid brushwood would hide their rough limbs, when constrained to shun the shock of winds and the rain-showers. . . . And like bristly boars these woodland men would lay their limbs naked on the ground, when overtaken by night time, wrapping themselves up around with leaves and foliage.

Modern naturalists and historians of science have praised Lucretius for his foresight (or is it hindsight?) in portraying what one specialist called "for his time a surprisingly accurate picture of the appearance and life of prehistoric man." Yet, nobody has ever wondered out loud how Lucretius succeeded in fathoming things which science only learned some two millennia later thanks to Darwin and modern archeology. That Lucretius did not rely on clairvoyance or on knowledge confided by Martians is evident from his fantastic description of the origin of these very woodland men. Let it also be noted that Lucretius's prehistoric man did not have the power of speech, did not make tools or use fire, and did not wear clothes or build houses.

For the hominologist there is only one answer to the secret of the ancient philosophers' insight in this matter: they used relic hominoids as models for their portraits of prehistoric man (fig. 1). From contemporary reality they were aware of the hairy hominoid, the skin-clad barbarian, and their own civilized selves, and on the basis of these three points in man's development they traced in their imaginations a curve of man's historic rise. It was not much more difficult than, looking at the "bristly boars," surmising the origin of domestic pigs and describing the life of their wild ancestors.

We do not know why Lucretius did not name his models, but we guess that he did not feel like mixing natural history with the names of satyrs, fauns, etc.—for such were the popular appellations of hominoids in the Greco-Roman world of his day. Yet ancient authors did use these names from time to time in a rather down-to-earth manner. According to Plutarch (1792: 349), when the Roman general Sulla (old spelling Sylla), having sacked Athens in 86 B.C., was returning with his army to Italy, he came to Dyrrachium (modern Durrës in Albania):

> In that neighbourhood stands Apollonia, near which is a remarkable spot of ground called Nymphaeum. The lawns and meadows are of incomparable verdure. . . . In this place, we are told, a satyr was taken asleep, exactly such as statuaries and painters represent to us. He was brought to Sylla, and interrogated in many languages who he was; but he uttered nothing intelligible; his accent being harsh and inarticulate, something between the neighing of a horse and the bleating of a goat. Sylla was shocked with his appearance and ordered him to be taken out of his presence.

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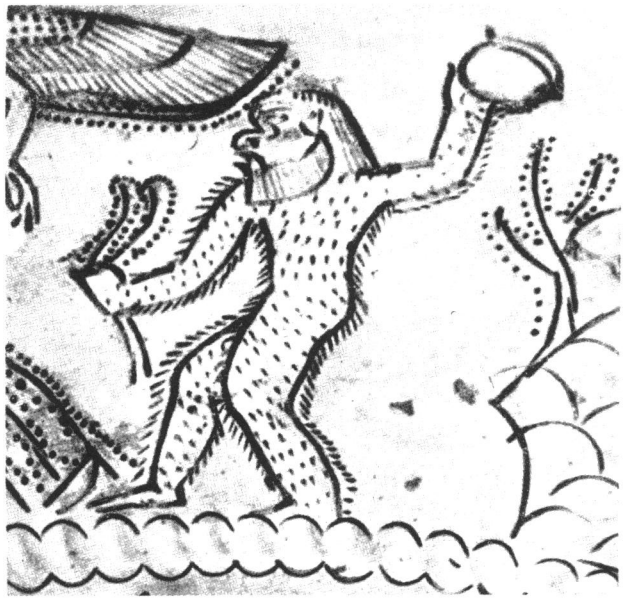

FIG. 1. Hominoid in attack, one of four hominoid figures depicted on a bowl of Carthaginian or Phoenician origin, dated 7th century B.C., found among the treasures of a Roman villa in Palestrina. Note the low cranium, prognathism, nose with deeply sunk bridge, and considerable knee bending in locomotion. (Reprinted from Gini 1962:fig. 5.)

This gem of ancient evidence is corroborated in certain details by reports of modern sightings: we have two reports, for example—one from Central Asia, the other from the Caucasus—of people stumbling on a sleeping hominoid. Capture or killing of hominoids during *sapiens* military activities in various epochs is also quite well represented in our files.

Geographer Pausanias (2d century A.D.), in his *Descriptions of Greece*, says that the silenus race (fig. 2) must be mortal, since their graves are known. He also says that when satyrs grow old, they are called sileni. And when we read in Pliny the Elder's *Natural History* (5.8) that "the Satyrs have nothing of ordinary humanity about them except human shape," we know exactly what he means. As a matter of fact, there are both realistic and "surrealistic," or symbolic, representations of the hominoid in ancient art. Those students who, mindful of the satyrs' and others' traditional beastly attributes, such as hoofs, horns, and tails, are prone to think of them in purely mythological terms seem to do no better than those of tender age who take the fairy-tale attributes of a Santa Claus too much to heart and fail to see a biological reality behind his mask. The symbolic signs of the hominoid in art and folklore initially served the purpose of identifying the creature and distinguishing him from both humans and animals (fig. 3). Besides, symbolism, like euphemism, tends to sprout under the influence of emotion and mystery, and these have always been part and parcel of man's relationship with the hominoid. This is, however, another vast theme which for lack of space we dare not pursue.

Besides a fair number of mythological images, which have played not a small part in European culture, we owe to the "classic" hominoids of the Greco-Roman epoch such notions as "satyriasis" and "nymphomania," which reflect certain traits of hominoid ethology and hint at the problems of man's relationship with creatures endowed with such patterns of behavior, and even one or two anatomical terms which seem to reflect certain peculiarities of hominoid physique. (This is not to forget, of course, the term "fauna" and the erroneous shifting of the names "Pan" and "Satyrus" to the Pongidae.)

The hominoid's presence in medieval Europe is amply documented in Bernheimer's *Wild Men in the Middle Ages* (1952). The evidence amassed therein is the more impressive when we consider that the author is overtly biased *against* the "wild man" and regards the hero of his book as fiction, not fact. Even this treasure-trove of hominology could not include all the wealth of the theme, however, and as an example of the omitted material we would mention Albertus Magnus (1193–1280), who is characterized by encyclopedias as a philosopher deeply interested in natural science. In *De Animalibus* (2.1.4.49–50), he cites the recent capture in Saxony of two (male and female) forest-dwelling hairy monsters much resembling human beings in shape. The female died of blood poisoning caused by dog bites, while the male lived on in captivity and even learned the use, albeit very imperfectly, of a few words. The creature's lack of reason, concludes Albertus, is evidenced by, among other things, his ever trying to accost women and exhibit lustfulness.

Eighteenth-Century Evidence

In 18th-century Europe, hominoids became "the last of the Mohicans" in the West of the continent. Here a good source of information in English is *Wolf-Children and Feral Man* (Singh and Zingg 1942). As regards "feral man," the authors' credentials are above suspicion because, like Bernheimer, they

FIG. 2. Silenus; note lack of hair on hands, knees, and feet. (Reprinted from Reinach 1906:414.)

FIG. 3. Hominoid and human from a Greek vase, suggesting that the ancients had ways of making friends with hominoids. (Similarly, Jane Goodall has shown that it is possible to make friendly contact with anthropoids in the wild.) Note the lack of hair on the hands and feet of the creature, called "Silénopappos" by art specialists, and the more than normal human knee-bending in locomotion. The presence of a tail is symbolic. Other scenes in Greco-Roman art show hominoids making love, drinking wine, sleeping, carrying loads, stealing fruit from orchards, and pulling thorns from one another's soles. (Reprinted from Reinach 1899:19.)

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didn't know what they were writing about. For example, they report (citing Tafel 1848:123–24) the following case from Spain (p. 230):

According to Le Roy, in the Pyrenees, shepherds who herded their flocks in the wood of Ivary, saw a wild man in the year 1774, who lived in clefts in the rocks. He appeared to be about thirty years of age, was very tall with hair like that of a bear, *who could jump and run as quickly as a chamois*. He appeared to be bright and happy and, according to appearances was not ungentle in character. He never had anything to do with anyone, and had no apparent interest in so doing. He often came near to the huts of the shepherds without making any attempt to take anything. Milk, bread, and cheese appeared to be unknown things to him, for he would not even take them when they were placed in his way. His greatest pleasure was to frighten the sheep, and break up the herds. When the shepherds put dogs on him, as they often did, he would disappear as quickly as an arrow shot from a bow, and he allowed no one to come near him. One morning he approached one of the huts, and as one of the people who belonged there approached him to catch him by the foot, he laughed and fled. . . . No one knows what became of him.

Turning to Eastern Europe, we learn (p. 219, citing Rauber 1888:49–50, who cites Virey 1817) that in 1767 the inhabitants of Fraumark in lower Hungary, pursuing a bear in the mountains,

came to a cave in the rocks in which a completely naked wild girl was found. She was tall, robust, and seemed to be about eighteen years old. Her skin was brown and she looked frightened. Her behavior was very crude. They had to use violence to make her leave the cave. But she did not cry and did not shed any tears. Finally they succeeded in bringing her to Karpfen, a small town of the county of Atlsohl, where she was locked up in an Asylum. She would only eat raw meat. . . .

A very detailed description of a hominoid's morphology and his behavior in captivity (which contrasts dramatically with the creature's state in the wild) is given as follows (pp. 237–40, citing Rauber 1888:49–55, who cites Wagner 1796; we have added emphasis to the description of those features which help identify the creature taxonomically):

Here you have information about the wild boy who was found a few years ago in the Siebenbürgen-Wallachischen border [Rumania] and was brought to Kronstadt [now Brasov], where in 1784 he is still alive. How the poor boy was saved from the forests . . . I cannot tell. However one must preserve the facts, as they are, in the sad gallery of pictures of this kind.

This unfortunate youth was of the male sex and was of medium size. He had an extremely wild glance. *His eyes lay deep in his head*, and rolled around in a wild fashion. *His forehead was strongly bent inwards*, and his hair of ash-gray color grew out short and rough. He had heavy brown *eyebrows*, *which projected out far over his eyes*, and a small *flat-pressed nose*. His *neck* appeared *puffy*, and at the windpipe he appeared goitrous. His *mouth stood somewhat out* when he held it half open as he generally did since he breathed through his mouth. His tongue was almost motionless, and his cheeks appeared more hollow than full, and, like his face, were covered with a dirty yellowish skin. On the first glance at this face, from which a wildness and a sort of animal-being shone forth, one felt that it belonged to no rational creature. . . . The other parts of the wild boy's body, especially the back and the chest were very hairy; *the muscles on his arms and legs were stronger and more visible than on ordinary people*. The hands were marked with callouses (which supposedly were caused by different uses), and the skin of the hands was dirty yellow and thick throughout, as his face was. On the finger he had very long nails; and, on the elbows and knees, he had knobby hardenings. The toes were longer than ordinary. He *walked* erect, but *a little heavily*. It seemed as if he would *throw himself from one foot to the other*. *He carried his head and chest forward*. . . . He walked bare-footed and did not like shoes on his feet. He was completely lacking in speech, even in the slightest articulations of sounds. The sounds which he uttered were ununderstandable murmuring, which he would give when his guard drove him ahead of him. This murmuring was increased to a howling when he saw woods or even a tree. He seemed to express the wish for his accustomed abode; for once when he was in my room from which a mountain could be seen, the sight of the trees caused him to howl wretchedly. . . . When I saw him the first time, he had no sense of possession. Probably it was his complete unfamiliarity with his new condition, and the longing for his earlier life in the wilds, which he displayed when he saw a garden or a wood. Similarly I explain why, at the beginning, he showed not the slightest emotion at the sight of women. When I saw him again after three years this apathy and disrespect had disappeared. As soon he saw a woman, he broke out into violent cries of joy, and tried to express his awakened desires also through gestures. . . . Yet he showed anger and unwillingness when he was hungry and thirsty; and in that case would have very much liked to attack man, though on other occasions he would do no harm to men or animals. Aside from the original *human body* which usually causes a pitiful impression in this state of wildness, and aside from walking erect, one missed in him all the characteristic traits through which human beings are distinguished from the animals; it was rather a much more pitiful sight to see how this helpless creature would *waddle around* in front of his keeper growling and glaring wildly, and longing for the presence of animals of prey, insensible to everything which appeared before him. In order to control this wild urge, as soon as he came near to the gates of the city, and approached the gardens and woods, they used to tie him up in the beginning. He had to be accompanied by several persons, because he would have forced himself free and would have run away to his former dwelling. In the beginning his food consisted only of all kinds of tree leaves, grass, roots, and raw meat. Only very slowly did he accustom himself to cooked food; and, according to the saying of the person who took care of him, a whole year passed before he learned to eat cooked food; when very obviously his animal wildness diminished.

I am unable to say how old he was. Outwardly he could have been from twenty-three to twenty-five years old. Probably he will never learn how to speak. When I saw him again after three years, I still found him speechless, though changed very obviously in many other respects. His face still expressed something animal-like but had become softer. . . . The desire for food, of which he now liked all kinds, (particularly legumes), he would show by intelligible sounds. He showed his visible contentment when one brought him something to eat, and sometimes he would use a spoon. He had gotten used to wear shoes and other clothes; but he was careless about how much they were torn. Slowly he was able to find a way to his house without a leader; the only work for which he could be used consisted of giving him a water jug which he would fill at the well and bring it to the house. This was the only service which he could perform for his guardian. He also knew how to provide himself with food by diligently visiting the houses where people had given him food. The instinct of imitation was shown on many occasions; but nothing made a permanent impression on him. Even if he imitated a thing several times, he soon forgot it again, except the custom which had to do with his natural needs, such as eating, drinking, sleeping, etc., and everything which had connection with these. He found his home in the evening, and at noon, the house where he expected food, led only by his habits. He never learned to know the value of money. He did accept it but only with the intention of playing with it, and did not care when he lost it again. Chiefly he was in every respect like a child whose capacities had begun to develop, only with this difference that he was unable to speak and could not make any progress in that regard. He showed his likeness with a child in the fact that he would gape at everything which one showed to him; but, with the same lack of concentration, he would change his glance from the old objects to new ones. If one showed him a mirror he would look behind it for the image before him. But he was completely indifferent when he did not find it, and would allow the mirror to get out of his range of vision. The tunes from musical instruments seemed to interest him a little, but it was a very slight interest which did not leave any impression. When I led him in front of the piano in my room, he listened to the tunes with an apparent pleasure, but did not dare to touch the keys. He showed great fear when I tried to force him to do so. Since 1784, the year he left Kronstadt, I never had a chance to receive any more reports about him.

If only all observers of unusual phenomena recorded them as thoroughly as the author of this report! We hold that the evidence speaks for itself and requires little comment, despite our urge to dwell at length on these marvels.

It is clear from the above that there is no need to travel to

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"geographically remote regions" to find evidence of the hominoids. With the right theory in mind, one need only visit libraries and museums to discover ample proof of their presence in historic times in the center of Europe. It is also clear that the creatures of the cases we have cited are by no means abnormal *sapiens*, but morphologically resemble modern man to the same extent as Neanderthalers do. Furthermore, the features of the "wild-boy of Kronstadt" perfectly match Neanderthal characteristics, both in morphology and locomotion (the latter as deduced from fossil remains). Examining the artistic representation of the hominoid, we also see unmistakably Neanderthaloid features in all those snub-nosed pans, fauns, satyrs, etc. The best portrayal of the hominoid, side by side with *H. sapiens* so that the former's Neanderthal traits become absolutely clear by comparison, is the sculpture of a wild man on the north portal of Notre-Dame, Semur-en-Auxois, Provence (fig. 4). The low cranial vault, the size of the facial skull and some of its features, the "seat" of the head all bespeak a very good Neanderthaler.

Let us sum up: Neanderthal fossils (or at least fossils that look Neanderthal) in Europe are known from prehistoric and historic times. The causes of Neanderthal disappearance are unknown. Europe in historic times is known to have been the habitat of hominoids that looked Neanderthal. Ergo, these hominoids *are* Neanderthalers.

Now, where does *Paranthropus* fit into this picture? We think nowhere. If Strasenburgh were to claim the cases we have cited for his hypothesis, he would have to explain how *Paranthropus* had evolved to resemble Neanderthal so much. Considering the different evolutionary paths implied for these types of higher primates, in the case of *Paranthropus* for as long as millions of years, such parallelism in morphology needs some explanation. If Strasenburgh were to put forth his own cases, he would have to accept three types of bipedal primates in Europe in historic times: *H. sapiens*, Neanderthal, and *Paranthropus*. As Ockham used to say, "Plurality is not to be assumed without necessity." It's up to Strasenburgh to show such a necessity in this case. In the meantime, *Paranthropus* in Europe is the odd man out.

Evidence from the Caucasus and Central Asia

Even if Strasenburgh doesn't want to engage us in Europe and seeks battle elsewhere, it is clear that what is true in the west of Eurasia cannot be ignored in its other parts, especially since Neanderthal fossils and/or artifacts have been found in all corners of it. Let us move east now to the Caucasus, lying on Europe's border with Asia and still a habitat of relic hominoids. That the creatures there are of Neanderthal origin is likely from, among other things, the Neanderthaloid Podkumok skullcap, dated to historic times, and V. S. Karapetian's evidence pertaining to a definitely non-*sapiens* creature so much resembling *sapiens* that it was suspected of being an enemy saboteur in disguise (Hunter with Dahinden 1973:179–80).

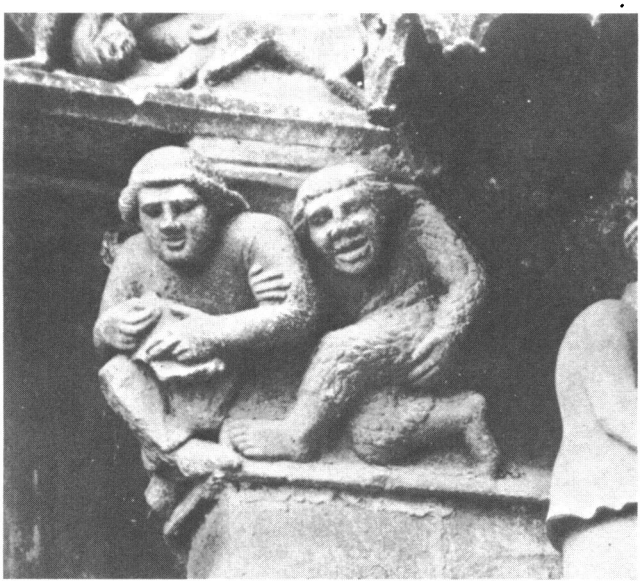

Fig. 4. Wild man and peasant, north portal, Notre-Dame, Semur-en-Auxois, Provence, France, 13th century. (Reprinted from Bernheimer 1952: fig. 7 by permission of the President and Fellows of Harvard College; original in Archives Photographiques, Paris.)

Farther east, in Central Asia, we have the Teshik-Tash Neanderthal find, the Nizami al-Arudi evidence (CA 15:454), the "wild man" in the *Anatomical Dictionary* (Vlček 1959), and the modern eyewitness evidence of Major General M. S. Topilsky. Topilsky's account, which deals with events of 1925 in the western Pamirs, runs in part as follows (Zerchaninov 1964):

> We recovered the body all right. It had three bullet wounds. . ... At first glance I thought the body was that of an ape: it was covered with hair all over. But I knew there were no apes in the Pamirs. Also, the body itself looked very much like that of a man. We tried pulling the hair, to see if it was just a hide used for disguise, but found that it was the creature's own natural hair. We turned the body over several times on its back and its front, and measured it. Our doctor (who was killed later the same year) made a long and thorough inspection of the body, and it was clear that it was not a human being.
>
> The body belonged to a male creature 165–170 cm. tall, elderly or even old, judging by the greyish colour of the hair in several places. The chest was covered with brownish hair and the belly with greyish hair. The hair was longer but sparser on the chest and close-cropped and thick on the belly. In general the hair was very thick, without any underfur. There was least hair on the buttocks, from which fact our doctor deduced that the creature sat like a human being. There was most hair on the hips. The knees were completely bare of hair and had callous growths on them. The whole foot including the sole was quite hairless, and was covered by hard brown skin. The hair got thinner near the hand, and the palms had none at all, but only callous skin.
>
> The colour of the face was dark, and the creature had neither beard nor moustache. The temples were bald and the back of the head was covered by thick, matted hair. The dead creature lay with its eyes open and its teeth bared. The eyes were dark, and the teeth were large and even and shaped like human teeth. The forehead was slanting and the eyebrows were very powerful. The protruding jawbones made the face resemble the Mongol type of face. The nose was flat, with a deeply sunk bridge. The ears were hairless and looked a little more pointed than a human being's with a longer lobe. The lower jaw was very massive.
>
> The creature had a very powerful chest and well developed muscles. We didn't find any important anatomical differences between it and man. The genitalia were like man's. The arms were of normal length, the hands were slightly wider and the feet much wider and shorter than man's.

Says Strasenburgh: "The data which have been amassed on the unknown hominid my Russian colleagues refer to as a 'relic hominoid' attest to the similarity between it and *Paranthropus* in every particular which can be compared. Those under the impression that the supposed extinction of *Paranthropus* has any valid theoretical or evidential basis would do well to reexamine the question." We readily endorse this statement, but with a slight modification: *Paranthropus* should be replaced by Neanderthal.

A Quick Look at American Hominoids

We deliberately leave aside the Himalayan Yeti for the time being, because we do not yet have the same quality of material on it as we have on the hominoids in Europe and in this country. Judging by the available data, the American hominoids look more "archaic" than their European counterparts. Whether this "archaism" is due to the specific environmental conditions and geographical isolation of the hominoids in America or to the fact that they represent an earlier stage of hominid evolution than the Neanderthal is not clear at the moment, but

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some preliminary considerations of a general nature are in order.

It is recognized that the higher primates initially entered America from Asia via the Bering land bridge, which was situated, let it be stressed, in *northern* latitudes. Not all higher primates living at the time in Asia could get to America. (The orangutan, for example, couldn't, because it lives in the south.) That *H. sapiens* could and did is a matter of fact, and it is only logical to suppose that his immediate evolutionary predecessors, who are known to have lived in northern lands, were also able to cross from Asia to America. Thus any proponent of *Paranthropus* or *Gigantopithecus* or any other early form of higher primates in America must first show that his chosen form could live in the north and then solve the problem of its coexistence with later non-*sapiens* forms which must have entered the continent just as *H. sapiens* did.

Conclusion

We must apologize to the reader for the unusual number and length of the quotations in this paper. We hope it is realized that these literary references are as valuable and revealing for anthropology in this case as fossil relics are in other cases. Without such a broad-minded approach, this research could not even have been begun.

We hold that the immediate task of the hominologist is to take care of the Neanderthalers, assuming in the meantime that they may have taken care of *Pithecanthropus*, and the latter of *Paranthropus*—or, perhaps, *Paranthropus* took care of himself. In other words, in the case of early hominids there may have been enough time for such factors as evolution, absorption, or extinction to account for the absence of these forms today, whereas with the late forms such factors don't seem to make a convincing case. Yet we realize that in matters of natural history man proposes and Nature disposes, and if, despite our arguments, all relic hominoids turn out to be none other than descendants of *Paranthropus*, we will sincerely congratulate our colleague Strasenburgh.

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On Split-Brain Research and the Culture-and-Cognition Paradox

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In looking for biological bases of cultural differences in thinking and learning while accepting the psychic unity of humans, Paredes and Hepburn (CA 17:121–27) have made an interesting correlation between neurological structure and cognition. I would like to limit my comments to several points concerning the nature of the correlation.

There are two main approaches to establish such a correlation. The one used by Paredes and Hepburn is to view the human brain with its individual variation as a fixed structural entity upon which a cultural tradition may use or "practice" certain attributes and thus emphasize less than the totality of patterns offered. These differences in emphasis lead to differences in cognitive functions. A second approach is to recognize the plasticity and malleability of the developing brain and to try to determine if a cultural tradition could, within limits, establish a different cognitive pattern by altering the neuronal organization. Paredes and Hepburn allude to such an approach when they say (p. 122), "Such a position appears roughly analogous to arguing that the human alimentary canal functions the same in all individuals, but the constituent digestive processes are altered by the particular species of plants and animals consumed." Further, they state (p. 125) that their identification of "the neurological bases for the existence of multiple cognitive processes . . . eliminates the necessity of explaining how the environment can radically alter the functioning of the brain." I shall present some evidence to illustrate that this second approach is not to be dismissed and to show that, while accepting the first approach as valid, it is still necessary to explain how the environment can change the brain. The two approaches are not mutually exclusive.

There is direct evidence for the environment's influencing the development of the mammalian brain. The possibility of similar processes affecting human cognition remains one of deduction. Sensory input is necessary for the proper functioning of cortical neurons. Kittens and mice whose eyes are sutured shut over a relatively short, but critical, time become blind, and no amount of stimuli at a later time can totally reverse this condition (Hubel and Wiesel 1970). This has been correlated with changes in neuron morphology and decreases in some dendritic spines (Globus and Scheibel 1967, Valverde 1967). How close a model this provides for humans is debated. Uncorrected amblyopia (lazy eye), however, leads to functional blindness in one eye, and this is thought to be the result of changes in the cortex (Moses 1970).

In addition to these large and pathological changes, there are some indications that the mammalian brain is capable of quantifiable changes from less absolute environmental stimuli. The meanings of the changes continue to be debated, but intricacies of the environment can affect the structure of the brain (Blakemore and Cooper 1970). Rats raised with environmental enrichment (that is, with peers, toys, much handling, etc.) as opposed to environmentally impoverished rats (those raised singly, without toys and handling) show differences in their brains, in structure and biochemistry (Bennett et al. 1964,

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